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EXAMINER

BEHNAMIAN, SHAHRIAR

ART UNIT

PAPER NUMBER

2617

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/595,799	Applicant(s) HABETHA ET AL.	
	Examiner SHAHRIAR BEHNAMIAN	Art Unit 2617	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 November 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This Office Action is in response to the Applicant's communication filed on 20 November 2009.

Claims 1-12 are pending in this office action. Claims 1-3, 5, 7 and 9 are amended. Claims 10-12 are newly added.

Regarding to claim rejections under 35 USC § 112, the rejection is herewith withdrawn.

Regarding to Objections to the Abstract and claim 5 and 9, the Objections are herewith withdrawn. However, new Objections have arisen, see below.

Response to Arguments

Applicant's arguments have been fully considered but are moot in view of the new ground(s) of rejection.

Objections

2. Claim 5 is objected to because the claim is dependent on an improper reference to a numerically following claim, see MPEP 608.01(n).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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3. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

4. Claims 1-7 and 9-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent No. 5,949,776 to Mahany et al. (hereinafter Mahany) in view of US Pub. No. 2004/0097199 to Kawamura et al. ("Kawamura").

As per claim 1, Mahany discloses a method for direct communication between a first station and a second station (**col. 5, lines 54-63; a direct communication link between to stations (i.e. peer to peer communications) is established**) in an Access Point controlled wireless network (**see Figs. 1a-c and associated text; col. 9, lines 33-58; the communication system 10 includes a local area network (LAN) for maintaining typical communication flow within the building premises**), wherein one channel communication is ruled by an identifier associated with the Access Point (**see Figs. 1a-c and associated text; col. 5, lines 54-63; col. 16, lines 14-32; as the data is transferred through the link, each station that connects with or through the control point device (i.e. access point) through a link (i.e. channel communication), is operated (i.e. ruled) by the address (i.e. identifier) that is associated with the Control Point Device (i.e. access point)**), comprising:

sending, by said first station to the second station, an invitation message for direct communication carrying said second identifier and optionally said second channel to said second station (**Fig. 6 and associated text; col. 3, line 65 to col. 4, line 12; col. 18, line 7-13; the first station transmits a request to communicate with the second station, carrying information about the channel (i.e. a second channel) that is to be communicated over (see col. 16, lines 15-16));**

sending, by said second station, a response message acknowledging the invitation message (**col. 10, lines 42-65; col. 13, lines 19-22; col. 18, lines 21-23; col. 19, lines 46-67; the destination station responds (e.g. with an ACK or CLEAR) to the transmitted request in the time period provided);**

generating a second identifier by said first station (**see Figs. 1a-c and associated text; col. 5, lines 54-63; col. 9, lines 33-58; col. 16, lines 14-32; a particular first station desires to connect to another station other than the access point (AP), the first station includes the address (hence includes an identifier) of the second station that it is trying to connect to and sends this information to the AP as to establish the connection optionally via at least a second channel), but fails to explicitly disclose that the second identifier different from the identifier associated with the Access Point. However, Kawamura discloses that generating a second identifier by said first station, the second identifier different from the identifier associated with the Access Point (Kawamura, Figs. 2-9 and associated text; pars. 0070-0078; the first station (e.g. B) generates a frame that included the destination address (i.e. identifier) that is different from the first identifier (e.g. DA #2), as illustrated in Fig. 5). It would have**

been obvious to a person with ordinary skill in the art at the time the invention was made to include the identifier of the second station into the transmission frame as disclosed by Kawamura into the system of Mahany as to enable direct communication between a first station and a new station different from the first connected station as to reduce hops and create a direct communication link between the first node and the node of interest

(Kawamura, pars. 0062-0064, 0070-0078).

setting up direct communication between said first station and said second station using said second identifier **(see Figs. 1a-c and associated text; col. 5, lines 54-63; col. 9, lines 33-58; col. 16, lines 14-32; col. 39, lines 19-29; the direct communication is set up between the first and second stations using at least the address (i.e. identifier) and by indicating the channel for communication)**, but fails to explicitly disclose that the first station and the second station are different from the Access Point. However, Kawamura discloses setting up direct communication between said first station and said second station using said second, wherein the first station and the second station are different from the Access Point **(Kawamura, Figs. 2-9 and associated text; pars. 0070-0078; a station (e.g. station A in Fig. 9) can facilitate a communication between two other stations (e.g. stations B and C) indirectly through itself (i.e. station A), where that station (e.g. station A) behaves as an access point; furthermore, direct communications avoiding intermediate nodes are created; the first station (e.g. B) generates a frame that included the destination address (i.e. identifier) that is different from the first identifier (e.g. DA #2), as illustrated in Fig. 5)**. It would have been obvious to a person with ordinary skill in the

art at the time the invention was made to include the identifier of the second station into the transmission frame as disclosed by Kawamura into the system of Mahany as to enable direct communication between a first station and a new station different from the first connected station as to reduce hops and create a direct communication link between the first node and the node of interest (**Kawamura, pars. 0062-0064, 0070-0078**).

As per claim 2, Mahany as modified by Kawamura discloses a method wherein said invitation message and said response message are sent via the Access Point using the identifier associated with the Access Point (**see Figs. 1a-c and associated text; col. 5, lines 54-63; col. 16, lines 14-32; col. 19, lines 46-67; the control point device sends a response (e.g. ACK, CLEAR) that was received from the destination station (e.g. second station) to the source station (e.g. first station) using the appropriate addresses (i.e. identifiers)**).

As per claim 3, Mahany as modified by Kawamura discloses a method wherein said invitation message and said response message are exchanged directly between said first station and said second station (**Mahany, col. 16, lines 14-32; col. 19, lines 46-67; col. 39, lines 19-29; the stations use point-to-point addressing, rather than the control point device to establish communication, including of transmission of request and receiving of response**), but fails to explicitly disclose that using the second identifier different from the identifier associated with the Access Point. However, Kawamura discloses that the second identifier is different from the identifier associated with the Access Point (**Kawamura, Figs. 2-9 and associated text; pars. 0070-0078; a**

station (e.g. station A in Fig. 9) can facilitate a communication between two other stations (e.g. stations B and C) indirectly through itself (i.e. station A), where that station (e.g. station A) behaves as an access point; furthermore, direct communications avoiding intermediate nodes are created; the first station (e.g. B) generates a frame that included the destination address (i.e. identifier) that is different from the first identifier (e.g. DA #2), as illustrated in Fig. 5).

As per claim 4, Mahany as modified by Kawamura discloses a method wherein said response message contains information that said second identifier is confirmed or that said second identifier is rejected and a third identifier is proposed (see Figs. 1a-c and associated text; col. 5, lines 54-63; col. 16, lines 14-32; col. 19, lines 1-18 and lines 46-67; if the second station lies outside the range of the access point device, where the transmission has not been acknowledged, then a series of hops (i.e. connecting through other devices that are connected to the network) are indicated to be used to establish a communication route by including the identification of the hopping sequence (that includes additional identifiers); or in the case of transmission collision (using Idle Sense Multiple Access), the transmitting station will retry at a later time or may use a different index of frequency within the hop table), but fails to explicitly disclose that said third identifier is different from the identifier associated with the Access Point. However, Kawamura discloses that said third identifier is different from the identifier associated with the Access Point (Kawamura, Figs. 2-9 and associated text; pars. 0062-0064, 0070-0078).

As per claim 5, Mahany as modified by Kawamura discloses a method wherein said response message contains information that said second channel is confirmed or that said second channel is rejected and the channel which is associated with the Access Point or a third channel is proposed (see Figs. 1a-c and associated text; col. 5, lines 54-63; col. 16, lines 14-32; col. 19, lines 1-18 and lines 46-67; col. 18, lines 26-50; col. 32, lines 21-25; the transmission of the first station can be acknowledged or not acknowledge due to error or collision; the current access point may choose to use alternate access points for communication if COST of current communication route is high; if the second station lies outside the range of the access point device, where the transmission has not been acknowledged, then a series of hops (i.e. connecting through other devices that are connected to the network) are indicated to be used to establish a communication route by including the identification of the hopping sequence (that includes additional identifiers); or in the case of transmission collision (using Idle Sense Multiple Access), the transmitting station will retry at a later time or may use a different index of frequency within the hop table).

As per claim 6, Mahany as modified by Kawamura discloses a method wherein said second identifier is a dedicated identifier for direct communication between stations (col. 5, lines 54-63; col. 39, lines 19-29; a direct communication link between to stations (i.e. peer to peer communications) is established; request for polls, and hence a communication link, can be initiated by using point-to-point addressing

(i.e. a dedicated identifier for direct communication), rather than through the control point device).

As per claim 7, Mahany as modified by Kawamura discloses a method wherein carrier sensing is applied to avoid collision on said communication channel ruled by an identifier associated with the Access Point (Fig. 5A and associated text; col. 5, lines 54-63; col. 39, lines 19-29; col. 14, lines 36-49; col. 17, lines 26-36; Idle Sense Multiple Access (ISMA) is implemented to avoid collision on the channel to be used, which is used on the links that are to be used for communications).

As per claim 9, the limitations are similar to those treated in the above rejection(s), and hence have been met by the same reference(s) as discussed claim 1.

As per claim 10, Mahany as modified by Kawamura discloses the wireless network of claim 9, wherein the first station chooses the first communication channel or a second communication channel, different from the first communication channel, for direct communication with the second station, and when the second communication channel is chosen, the first station sends an indication of the second communication channel to the second station (Kawamura, Figs. 2-9 and associated text; pars. 0062-0064, 0070-0078; a station (e.g. station A in Fig. 9) can facilitate a communication between two other stations (e.g. stations B and C) indirectly through itself (i.e. station A), where that station (e.g. station A) behaves as an access point; furthermore, direct communications avoiding intermediate nodes are created; the first station (e.g. B) generates a frame that included the destination address (i.e.

identifier) that is different from the first identifier (e.g. DA #2), as illustrated in Fig. 5).

As per claim 11, Mahany as modified by Kawamura discloses the wireless network of claim 10, wherein, when the second station receives an indication of the second communication channel, the response message contains information that the second communication channel is confirmed or that the second communication channel is rejected and the first communication channel which is associated with the access point or a third communication channel is proposed (Kawamura, Figs. 2-9 and associated text; pars. 0062-0064, 0070-0078; a station (e.g. station A in Fig. 9) can facilitate a communication between two other stations (e.g. stations B and C) indirectly through itself (i.e. station A), where that station (e.g. station A) behaves as an access point; furthermore, direct communications avoiding intermediate nodes are created; the first station (e.g. B) generates a frame that included the destination address (i.e. identifier) that is different from the first identifier (e.g. DA #2), as illustrated in Fig. 5).

As per claim 12, the limitations are similar to those treated in the above rejection(s), and hence have been met by the same reference(s) as discussed claim 10.

5. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Mahany in view of Kawamura, and further in view of US Patent No. 6,483,852 to Jacquet et al. (hereinafter Jaquet).

As per claim 8, Mahany as modified by Kawamura discloses a method that operates in the communication protocol of the IEEE 802.3 or IEEE 802.5 standard, fails to explicitly teach a method that operates in the communication protocol of the IEEE 802.11 standard. However, Jacquet discloses a network using a method that operates in the communication protocol of the IEEE 802.11 standard (**see Jacquet, col. 3, lines 11-30; the format of a radio network can be chosen from at least the IEEE 802.11 standards, and the format of a cabled network can be chosen from at least the IEEE 802.3 and 802.5 standards**). It would have been obvious to a person with ordinary skill in the art at the time the invention was made to incorporate the IEEE 802.11 standard as disclosed by Jacquet into the network of Mahany as to further extend the applicability of the method and to incorporate radio frequency connectivity to wirelessly connect devices that are capable of radio communication (**see Jacquet, col. 3, lines 11-30**).

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after

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the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Note: Examiner has pointed out particular references contained in the prior arts of record in the body of this action for the convenience of the applicant. Although the specified citations are representative of the teachings in the art and are applied to the specific limitations within the individual claim, other passages and figures may apply as well. Applicant should consider the entire prior art as applicable as to the limitations of the claims. It is respectfully requested from the applicant, in preparing the response, to consider fully the entire references as potentially teaching all or part of the claimed invention, as well as the context of the passage as taught by the prior arts or disclosed by the examiner.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to SHAHRIAR BEHNAMIAN whose telephone number is (571)270-3197. The examiner can normally be reached on 7:30-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, KENT CHANG can be reached on (571)272-7667. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/SHAHRIAR BEHNAMIAN/
Examiner, Art Unit 2617

/Kent Chang/
Supervisory Patent Examiner, Art Unit 2617